

**January 2011**

**Global Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley PSP**  
**Watt-Hours per Square Meter**

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily
1	0	0	0	0	0	0	0	3	13	25 ?	36	56	115	98	94	57	22	3	0	0	0	0	0	0	522
2	0	0	0	0	0	0	0	6	21	51	83	70	59	89	199	173	43	10	0	0	0	0	0	0	804
3	0	0	0	0	0	0	0	8	135	311	397	466	492	455	368	233	83	6	0	0	0	0	0	0	2953
4	0	0	0	0	0	0	0	6	29	78	101	136	328	298	368	233	83	10	0	0	0	0	0	0	1670
5	0	0	0	0	0	0	0	4	88	248	308	382	406	325	226	139	63	7	0	0	0	0	0	0	2194
6	0	0	0	0	0	0	0	7	85	241	373	461	462	206	139	62	47	9	0	0	0	0	0	0	2092
7	0	0	0	0	0	0	0	3	39	128	187	220	172	135	167	103	34	9	0	0	0	0	0	0	1195
8	0	0	0	0	0	0	0	4	21	45	132	177	164	184	113	84	81	8	0	0	0	0	0	0	1013
9	0	0	0	0	0	0	0	6	33	178	329	413	517	488	337	166	61	11	0	0	0	0	0	0	2538
10	0	0	0	0	0	0	0	8	35	68	139	226	234	172	110	87	25	6	0	0	0	0	0	0	1110
11	0	0	0	0	0	0	0	9	53	88	213	273	81	85	62	58	32	12	0	0	0	0	0	0	967
12	0	0	0	0	0	0	0	3	37	97	149	151	227	194	118	85	30	8	0	0	0	0	0	0	1099
13	0	0	0	0	0	0	0	3	32	195	259	238	296	290	250	128	52	11	0	0	0	0	0	0	1755
14	0	0	0	0	0	0	0	7	138 ?	232	426	572	518	463	413	248	93	11	0	0	0	0	0	0	3122
15	0	0	0	0	0	0	0	8	91	251	257	425	385	360	216	146	68	13	0	0	0	0	0	0	2220
16	0	0	0	0	0	0	0	2	8 ?	38	81	172	132	154	149	92	33	8	0	0	0	0	0	0	867
17	0	0	0	0	0	0	0	5	46	133	207	167	212	173	130	79	22	2	0	0	0	0	0	0	1175
18	0	0	0	0	0	0	0	7	45	84	296	407	463	420	172	119	33	6	0	0	0	0	0	0	2051
19	0	0	0	0	0	0	0	1	11	37	69	110	178	137	114	67	27	1	0	0	0	0	0	0	751
20	0	0	0	0	0	0	0	6	45	133	160	237	291	350	276	159	81	16	0	0	0	0	0	0	1754
21	0	0	0	0	0	0	0	11	64	210	450	571	553	499	380	297	133	14	0	0	0	0	0	0	3181
22	0	0	0	0	0	0	0	9	75	268	409	521	557	528	438	305	138	22	0	0	0	0	0	0	3270
23	0	0	0	0	0	0	0	4	20	87	228	510	534	512	430	298	132	19	0	0	0	0	0	0	2772
24	0	0	0	0	0	0	0	10	50	242	394	323	293	248	298	241	133	32	0	0	0	0	0	0	2263
25	0	0	0	0	0	0	0	6	72	178	255	202	290	211	170	125	31	7	0	0	0	0	0	0	1547
26	0	0	0	0	0	0	0	1	5 ?	24 ?	?	?	?	?	?	?	5 ?	2	0	0	0	0	0	0	37 ?
27	0	0	0	0	0	0	0	1	3 ?	?	?	?	?	49	47	40	19 ?	3	0	0	0	0	0	0	162 ?
28	0	0	0	0	0	0	0	0	1 ?	?	?	49 ?	63 ?	86 ?	43 ?	55 ?	11 ?	4	0	0	0	0	0	0	312 ?
29	0	0	0	0	0	0	0	1	28	50 ?	161	554	571	543	458	326	159	32	0	0	0	0	0	0	2883
30	0	0	0	0	0	0	0	9	158	284	398	510	550	529	445	316	148	22	0	0	0	0	0	0	3369
31	0	0	0	0	0	0	0	5	40	111	162	331	537	319	245	121	57	16	0	0	0	0	0	0	1945
Avg	0	0	0	0	0	0	0	5	49	142	238	308	334	287	232	155	64	11	0	0	0	0	0	0	1729
S D	0	0	0	0	0	0	0	3	40	89	123	168	173	160	131	90	45	8	0	0	0	0	0	0	976
S/A	0	0	0	0	0	0	0	0.57	0.82	0.63	0.52	0.55	0.52	0.56	0.57	0.58	0.7	0.72	0	0	0	0	0	0	0.56
Min	0	0	0	0	0	0	0	0	1	24	36	49	59	49	43	40	5	1	0	0	0	0	0	0	37
Max	0	0	0	0	0	0	0	11	158	311	450	572	571	543	458	326	159	32	0	0	0	0	0	0	3369
n	0	0	0	0	0	0	0	149	347	327	334	342	343	350	355	352	353	176	0	0	0	0	0	0	3428

Daylight Data Recovery: 0.0% missing; 0.0% untested; 6.7% exceed the 15% QC threshold -- 3673 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 25821F3    Calibration Factor: 9.020 μV/W/m<sup>2</sup>    Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

January 2011

Direct Normal Solar Radiation  
 Hourly Integrated and Daily Totals  
 Instrument: Eppley NIP  
 Watt-Hours per Square Meter

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily	
1	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
2	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
3	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
4	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
5	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
6	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
7	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
8	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
9	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
10	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
11	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
12	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
13	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
14	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
15	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
16	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
17	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
18	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
19	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
20	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
21	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
22	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
23	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
24	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
25	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
26	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
27	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
28	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
29	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
30	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
31	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
Avg	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	N/A	*
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	0	N/A
Max	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	0	N/A
n	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Daylight Data Recovery: 99.9% missing; 0.0% untested; 0.1% exceed the 15% QC threshold -- 3673 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480  $\mu\text{V}/\text{W}/\text{m}^2$  Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

**Bluefield State College**  
**37.27 N Latitude 81.24 W Longitude 803 Meters AMSL Time Zone -5**

**January 2011**

**Diffuse Solar Radiation (Shadow Band) on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley PSP**  
**Watt-Hours per Square Meter**

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily
1	0	0	0	0	0	0	0	3	13	24	36	58	119	104	99	59	23	3	0	0	0	0	0	0	540
2	0	0	0	0	0	0	0	6	21	53	87	73	61	73	106	53	30	9	0	0	0	0	0	0	572
3	0	0	0	0	0	0	0	6	34 ?	?	?	?	117	43	39	33	19	3	0	0	0	0	0	0	295 ?
4	0	0	0	0	0	0	0	6	30	79	103	142	284	150	55	43	25	7	0	0	0	0	0	0	922
5	0	0	0	0	0	0	0	3	87	212 ?	236 ?	319 ?	171	214	124	108	44	6	0	0	0	0	0	0	1523 ?
6	0	0	0	0	0	0	0	6	84	225 ?	?	323 ?	175	199	137	64	46	9	0	0	0	0	0	0	1268 ?
7	0	0	0	0	0	0	0	2	39	129	190	220	177	142	173	106	34	8	0	0	0	0	0	0	1220
8	0	0	0	0	0	0	0	4	21	45	136	177	172	169	114	87	53	7	0	0	0	0	0	0	986
9	0	0	0	0	0	0	0	5	33	173	279 ?	234	67	64	75	111	56	10	0	0	0	0	0	0	1108
10	0	0	0	0	0	0	0	8	36	71	147	230	244	181	116	91	26	6	0	0	0	0	0	0	1156
11	0	0	0	0	0	0	0	10 ?	53	92	218	278	86	90	65	61	33	13	0	0	0	0	0	0	998
12	0	0	0	0	0	0	0	3	38	101	155	158	235	203	123	89	30	7	0	0	0	0	0	0	1140
13	0	0	0	0	0	0	0	2	33	188	256	246	261	262	232	130	53	10	0	0	0	0	0	0	1673
14	0	0	0	0	0	0	0	7	70 ?	147 ?	307	121	92	118	108	65	62	11	0	0	0	0	0	0	1107 ?
15	0	0	0	0	0	0	0	7	91	224 ?	248	259	266	327	221	150	69	13	0	0	0	0	0	0	1876
16	0	0	0	0	0	0	0	1	8	40	85	181	138	162	155	96	34	7	0	0	0	0	0	0	908
17	0	0	0	0	0	0	0	5	46	136	208	177	222	182	138	83	23	2	0	0	0	0	0	0	1222
18	0	0	0	0	0	0	0	8	46	88	220	222	166	228	170	122	34	5	0	0	0	0	0	0	1309
19	0	0	0	0	0	0	0	1	11	34	72	116	187	143	120	71	28	1	0	0	0	0	0	0	784
20	0	0	0	0	0	0	0	6	44	135	167	239	257	232	249	155	70	15	0	0	0	0	0	0	1568
21	0	0	0	0	0	0	0	12	59	140	90	112	117	122	63	48	31	10	0	0	0	0	0	0	803
22	0	0	0	0	0	0	0	8	63	98	69	59	58	54	49	41	29	9	0	0	0	0	0	0	538
23	0	0	0	0	0	0	0	3	20	91	209	250	158	75	63	50	33	10	0	0	0	0	0	0	963
24	0	0	0	0	0	0	0	9	50	169	234	287	300	258	231	107	70	19	0	0	0	0	0	0	1736
25	0	0	0	0	0	0	0	5	69	158	222	213	286	220	176	129	33	7	0	0	0	0	0	0	1517
26	0	0	0	0	0	0	0	0	7	18 ?	?	?	?	?	?	?	6 ?	3	0	0	0	0	0	0	34 ?
27	0	0	0	0	0	0	0	0	2 ?	18 ?	?	25	28	40	34	26	13	3	0	0	0	0	0	0	189 ?
28	0	0	0	0	0	0	0	0	0 ?	?	?	38 ?	41 ?	53 ?	29	38 ?	9 ?	2	0	0	0	0	0	0	209 ?
29	0	0	0	0	0	0	0	0	10	19	39	62	80	72	62	52	36	14	0	0	0	0	0	0	446
30	0	0	0	0	0	0	0	8	33	47	58	78	80	73	71	66	41	12	0	0	0	0	0	0	568
31	0	0	0	0	0	0	0	5	42	115	171	239	193	280	223	125	61	16	0	0	0	0	0	0	1470
Avg	0	0	0	0	0	0	0	5	38	106	163	177	161	151	121	82	37	8	0	0	0	0	0	0	989
S D	0	0	0	0	0	0	0	3	25	64	79	88	81	79	65	36	17	5	0	0	0	0	0	0	486
S/A	0	0	0	0	0	0	0	0.67	0.65	0.6	0.49	0.5	0.5	0.52	0.54	0.44	0.47	0.55	0	0	0	0	0	0	0.49
Min	0	0	0	0	0	0	0	0	0	18	36	25	28	40	29	26	6	1	0	0	0	0	0	0	34
Max	0	0	0	0	0	0	0	12	91	225	307	323	300	327	249	155	70	19	0	0	0	0	0	0	1876
n	0	0	0	0	0	0	0	143	342	314	301	331	356	354	359	354	357	176	0	0	0	0	0	0	3389

Daylight Data Recovery: 0.0% missing; 0.0% untested; 7.7% exceed the 15% QC threshold -- 3673 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17860F3 Calibration Factor: 7.010 μV/W/m² Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.